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1 of 2

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/171,690 10/23/98 KANZLER

H 4501

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 EXAMINER

VANAMAN, F

ART UNIT	PAPER NUMBER
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3611 *D*

DATE MAILED:

10/04/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/171,690	Applicant(s) Kanzler et al.
	Examiner Frank Vanaman	Group Art Unit 3611



Responsive to communication(s) filed on Jul 17, 2000

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1-27 is/are pending in the application.

Of the above, claim(s) 4, 8, 11-16, 20, 21, and 27 is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-3, 5-7, 9, 10, 17-19, and 22-26 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on Oct 23, 1998 is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 3611

Election/Restriction

1. Applicant's election without traverse of Species I in Paper No. 9 is acknowledged.
2. Claims 4, 8, 11-16, 20, 21 and 27 (as regards claim 27, please see below) are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species. An office action on the merits of claims 1-3, 5-7, 9, 10, 17-19 and 22-26 follows.

The examiner notes that claim 27 is dependent upon claim 11, which is directed to a non-elected species. As claim 27 is understood to comprise all of the limitations of claim 11, it has been additionally withdrawn by the examiner as being directed to a non-elected species

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the snow plow blower, the tilting device for a platform, the tilting device for a driver's cab, the track tensioner, the electronic engine control, all vehicle components being "composed in the manner of modules", the traveling direction switch and the parking brake must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The term "piste" is not in common usage in the English Language. It appears as though the term is being used as an equivalent to "path", "trail" or "track", the appropriate one of which should replace "piste".
6. The specification lacks the preferred headings for the various sections, as set forth below. The following order or arrangement is preferred in framing the specification and, except for the reference to "Microfiche Appendix" and the drawings, each of the lettered items should

Art Unit: 3611

appear in upper case, without underlining or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) Title of the Invention.
- (b) Cross-References to Related Applications.
- (c) Statement Regarding Federally Sponsored Research or Development.
- (d) Reference to a "Microfiche Appendix" (see 37 CFR 1.96).
- (e) Background of the Invention.
 - 1. Field of the Invention.
 - 2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) Brief Summary of the Invention.
- (g) Brief Description of the Several Views of the Drawing(s).
- (h) Detailed Description of the Invention.
- (I) Claim or Claims (commencing on a separate sheet).
- (j) Abstract of the Disclosure (commencing on a separate sheet).
- (k) Drawings.
- (l) Sequence Listing (see 37 CFR 1.821-1.825).

7. The disclosure is objected to because of the following informalities: in the specification, the use of the non-English term "piste" is informal; on page 1, the insertion beginning on line 1 is not clear in that the inserted text comprises the beginning of a new sentence, while the retained specification text on line 1 is not a conclusion of a sentence; on page 2, the reference to the claim preamble should be deleted.

Appropriate correction is required.

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of 37 CFR 1.71(a)-(c):

- (a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to

Art Unit: 3611

enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.

(b) The specification must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions and from what is old. It must describe completely a specific embodiment of the process, machine, manufacture, composition of matter or improvement invented, and must explain the mode of operation or principle whenever applicable. The best mode contemplated by the inventor of carrying out his invention must be set forth.

(c) In the case of an improvement, the specification must particularly point out the part or parts of the process, machine, manufacture, or composition of matter to which the improvement relates, and the description should be confined to the specific improvement and to such parts as necessarily cooperate with it or as may be necessary to a complete understanding or description of it.

The specification is objected to under 37 CFR 1.71 because it fails to provide a complete written description of the invention. On page 7, it is not at all clear how a purely electric operation of the vehicle can achieve any weight reduction absent a physical reconfiguration of the vehicle. On page 9, the specification refers to the adjusting of a gear ratio of a snow plow shaft by a potentiometer, however the specification fails to provide any further details as to the structure which would allow such an adjustment to be made. On pages 8-10, the specification refers to an optimization of consumption, however, the specification fails to set forth how this optimization is achieved.

Claim Rejections - 35 USC § 112

9. Claims 19 and 25^{are} rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 19 refers to consumption-optimum speed for the engine, however the specification fails to set forth how such an optimization may be achieved, as noted in the specification objections above.

10. Claims 1-3, 5-7, 9, 10, 17-19 and 22-26 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The claims appear to be a direct translation from a foreign language. The structure

Art Unit: 3611

which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. Note the format of the claims in the patent(s) cited.

Some examples of indefinite or confusing language are cited below; this is not a complete listing: in claim 1, line 1, the term "piste" is not descriptive; in claim 1, line 2, it is unclear whether the terms following "preferably" form part of the claimed invention; in claim 1, line 3, the term "each track" lacks a clear antecedent basis; in claim 1, line 4, it is unclear whether the terms following "such as" form part of the claimed invention; in claim 1, line 5, it is unclear what other elements are being recited by "or the like", in claim 1, line 8, it is not clear whether the terms associated with "possibly" are a part of the invention; in claim 1, line 10, "said electric drive..." lacks a clear antecedent basis; in claim 3, line 3-4, the inclusion of the steering gear is and the single electric motor appears to contradict the recitation of claim 1, line 8; in claim 6, line 4, it is not clear whether or not further engines or motors are being recited beyond the recitation of claim 1, further the term "travel engines or motors" lacks a clear antecedent basis; in claim 10, line 3, the phrase "are composed in the manner of modules" is confusing; etc.

Each and every claim should be carefully reviewed and revised for clarity and definiteness under 35 USC §112, second paragraph; all terms should be provided with a clear antecedent basis in the recitations.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 2, 5, 6, 9, 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan Manufacturing Company (WO 94/09548; "Logan") in view of Buchdrucker (US

Art Unit: 3611

5,018,592). The Logan reference teaches a vehicle (10) having an internal combustion engine module (13d), drivingly connected through a planetary gear set module (page 13, line 1) to a drive sprocket module (14) of a track (11) and having accessory drives (16) of additional vehicle modules (page 12, lines 14-15), including an electrically powered implement module (12) driven by rotary electric motors (35t), the internal combustion engine connected to a generator module (13), and a pair of electric motor modules (35) for directly driving the tracks, possibly including a gear (page 12, line 7) associated with each drive sprocket, and wherein regenerative braking may be had by driving the motors as generators (page 5, lines 14-23), the regenerated energy being stored in a battery (page 5, line 22), the operation of all of the motors and accessories being controlled by a electronic controller (98) located centrally of the vehicle, the vehicle of Logan being provided with a heating means in the form of a resistance grid (page 5, line 23) which is fed with waste electrical energy from the drive motors, under certain stopping and slowing conditions, the vehicle further provided with a parking brake which is automatically actuated in response to the deactivation of the drives (page 5, lines 11-14).

Logan fails to teach the implement as being a rotary snow plow synchronized to the electric driving motors. Buchdrucker teaches a driving vehicle having a motor (15) a rotary snow plow (18) and driven wheels (31, 32) wherein the operation of the plow and wheels may be synchronized, through the operation of clutches (16, 17, 20 and 21). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a snow plow as an implement to the vehicle of Logan as suggested by Buchdrucker for the purpose of clearing accumulated snow from a desired area. The reference of Logan as modified by Buchdrucker fails to specifically teach the snow plow as being operated from an electric motor, however in view of the teachings of Logan as directed to rotary implements (12) being electrically powered, it would have been obvious to one of ordinary skill in the art at the time of the invention to power the plow electrically. Further, in view of the synchronization taught by Buchdrucker, it would have been obvious to one of ordinary skill in the art at the time of the invention to operate the implement-

Art Unit: 3611

driving electric motor in synchronization with the driving motors for the purpose of conserving energy when the vehicle is stopped, the use of the snow plow being redundant in a stopped condition.

13. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logan in view of Buchdrucker and Ossi (US 5,101,919). The reference of Logan as modified by Buchdrucker is discussed above and fails to teach the provision of a single electric motor driving both sprockets and including a steering gear. Ossi teaches a dual track (12, 14, 16, 18) driving system which derives its power from a single source (engine 20) and includes a differential steering mechanism (40, 42, 48, etc.) including a plurality of planetary gear sets for allowing turning of the vehicle. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ a differential steering system with a plurality of steering gears as taught by Ossi to the vehicle of Logan as modified by Buchdrucker for the purpose of requiring only a single drive motor, rather than a pair.

14. Claims 7, 18, 19 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan in view of Buchdrucker and Kawakatsu (US 4,335,429). The reference of Logan as modified by Buchdrucker is discussed above and fails to teach an electronic engine control, a traveling speed set point device such as an accelerator directed to both the engine and motors, a device for determining consumption-optimum engine speeds, and means for sensing the accelerator and brake conditions. Kawakatsu teaches a hybrid drive system involving both an engine (1) and a plurality of motor-generators (5, 7), the vehicle provided with an overall controller (35, figure 4), which receives information from a speed set point transmitting element such as an accelerator (67, 67a), a brake (69, 69b), outputs driving speed information to both an electric motor (AP[H]) and the engine ((AP[E])) through a converting engine controller (17), and wherein the controller includes an evaluation section for determining an optimum consumption (figures 1, 2, 8, 9, 10a, 10b) and driving configuration based on traveling conditions.

Art Unit: 3611

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the traveling speed set point device and brake device as taught by Kawakatsu to the vehicle of Logan as modified by Buchdrucker for the purpose of allowing the user to control the motion of the vehicle. Further, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a separate engine control device as taught by Kawakatsu to control the engine of the vehicle of Logan as modified by Buchdrucker so as to allow a single common controller to be operable with numerous different capacity engines, requiring only a change in the transfer function of the engine controller. Further it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the consumption optimization taught by Kawakatsu for the vehicle of Logan as modified by Buchdrucker for the purpose of determining an appropriate and efficient operating characteristic, based on sensed driving conditions.

15. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logan in view of Buchdrucker, Kawakatsu and Tsutsui et al (US 5,649,880). The reference of Logan as modified by Buchdrucker and Kawakatsu is discussed above and fails to teach a shift position detection device. Tsutsui teaches a transmission control scheme including a hill-hold function and a fail safe, wherein a shift position is determined (Step 2-2-4-4) as a part of the failsafe routine. It would have been obvious to one of ordinary skill in the art at the time of the invention to further determine a transmission shift position as suggested by Tsutsui in the vehicle of Logan as modified by Buchdrucker and Kawakatsu for the purpose of applying a stopping hill-hold function which determines a proposed direction of travel as set by the driver.

Conclusion

16. Applicant is reminded that claims 4, 8, 11-16, 20, 21 and 27 have been withdrawn from consideration and have not been treated in this office action, as set forth in the Election and Restriction section above.

Art Unit: 3611

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Huddle (US 2,735,253), Mambelli (US 4,545,450), Doyen et al. (US 4,632,200), Taga et al. (US 4,669,562), Inoue (US 4,738,326), Hartmann (US 5,022,478), James (US 5,363,937), Dow et al. (US 5,373,909), Cooper (US 5,590,041), Satzler (US 5,857,532), and Jennen (US 5,531,282) teach vehicle structures of pertinence.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Vanaman whose telephone number is (703) 308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-1113.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, DC 20231

or faxed to :

(703) 305-3597 or 305-7687 (for formal communications intended for entry;
informal or draft communications may be faxed to the same number but should be
clearly labeled "UNOFFICIAL" or "DRAFT")

FRANK B. VANAMAN
Patent Examiner
Art Unit 3611

September 29, 2000



A handwritten signature in black ink, appearing to read "FRANK B. VANAMAN". To the right of the signature, the date "9/29/00" is written vertically.